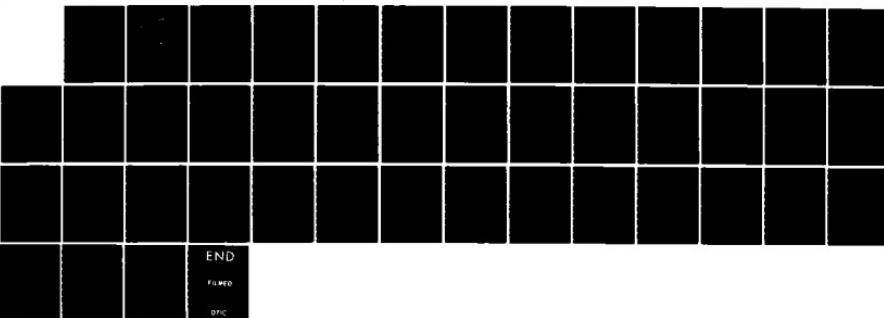


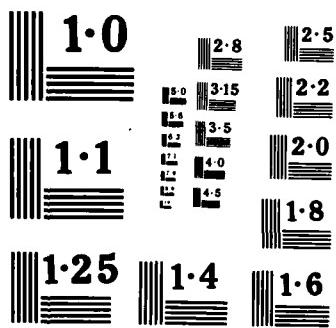
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DEPARTMENT OF THE ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEAR 1986

SUBMITTED TO CONGRESS

FEBRUARY 1985



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PROCUREMENT	AIRCRAFT	MISSILES	OTHER
	WEAPONS & TRACKED COMBAT VEHICLES		AMMUNITION

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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) (in 6 parts) Department of the Army Justification of Estimates for Fiscal Year 1986, submitted to Congress February 1985, Procurement Programs, Aircraft, Missiles, Weapons & Tracked Cbt Veh., Ammunition, Other Procurement & Constr Programs		5. TYPE OF REPORT & PERIOD COVERED Army Procurement Budget Justification, FY 1986
7. AUTHOR(s) Department of the Army		6. PERFORMING ORG. REPORT NUMBER 8. CONTRACT OR GRANT NUMBER(s)
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19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Army Procurement Programs Budget Justification Books covering Aircraft, Missiles, Weapons and Tracked Combat Vehicles, Ammunition, Other Procurement, Army Appropriations programs and Construction programs submitted by the Army to Congress February 1985 for Fiscal Year 1986.		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) In justification of programs requested, this document, in separate volume for each of the five Procurement Appropriations, and one separate volume for Construction Programs, provides backup data for the Army Budget submission for FY 1986. Included are Summaries of Requirements, Program and Financing Statements and Selected Data Sheets. (These volumes are unclassified).		

DEPARTMENT OF THE ARMY
MISSILE PROCUREMENT, ARMY

JUSTIFICATION OF ESTIMATES FOR FISCAL YEARS 1986, 1987

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MISSILE PROCUREMENT, ARMY

Section 1

Budget Appendix Extract

Language

Program and Financing Schedule

Object Classification Schedule

2-1 February 1985

APPROPRIATION LANGUAGE

For construction, procurement, production, modification, and modernization of missiles, equipment, including ordnance, ground handling equipment, spare parts, and accessories therefore; specialized equipment and training devices; expansion of public and private plants, including the land necessary therefor, without regard to section 4774, title 10, United States Code, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title and procurement and installation of equipment, appliances, and machine tools in public and private plants, reserve plants and Government and contractor owned equipment layaway; and other expenses necessary for the foregoing purposes; as follows: (For the CHAPARRAL program, \$32,000,000; for Other Missile Support, \$9,300,000; for the PATRIOT program, \$976,400,000; for the STINGER program, \$209,600,000; for the LASER HELIFIRE program, \$225,000,000; for the TOW program, \$201,700,000; for the PERSHING II program, \$370,000,000; for the MLRS program, \$541,400,000; for modification of missiles, \$208,800,000; for spares and repair parts, \$270,300,000; for support equipment and facilities, \$122,500,000; in all: \$3,167,000,000;) \$3,386,700,000 to remain available for obligation until September 30, 1988.

(10 U.S.C. 2353, 2361, 3012, 1531-32; Department of Defense Appropriation Act, 1983; additional authorizing legislation to be proposed)

EXPLANATION OF LANGUAGE CHANGES

- 1/ To change the amount of the appropriation for FY 1986.
- 2/ To change the obligation expiration date for the FY 1986 program.

Missile Procurement, Army Program and Financing (in Thousands of dollars)		04 Feb 85 FISCAL YEAR 1992	
Budget Plan (amounts for procurement actions program)		Obligations	
Identification Code	21-2032-0-1-051	1984 actual	1985 est.
Program by activities:			
Direct program:			
00 . 0101 Other missiles	107,363		
00 . 0201 Modification of missiles	33,547		
00 . 0301 Spares and repair parts	33,370		
00 . 0401 Support equipment and facilities	11,661		
00 . 9101 Total direct program		185,941	
01 . 0101 Reimbursable program			22,732
10 . 0001 Total			208,673
Financing:			
Different collections from:			
11 . 0001 Federal funds(-)	8,662		
13 . 0001 Trust funds(-)	7,561		
17 . 0001 Recovery of prior year obligations(-); Unobligated balance available, start of year:	-31,998		
21 . 4002 For completion of prior year budget plans	-217,237		
21 . 4007 Reprogramming from/to prior year budget plan	-24,140		
25 . 0001 Unobligated balance lapsing	24,140		
39 . 0001 Budget authority			

2-3 February 1985

Missile Procurement, Army
Program and Financing (in thousands of dollars)

04 Feb 85

FISCAL YEAR 1983

**Budget Plan (Amounts for PROCUREMENT
actions programmed)**

Obligations

Identification code	21-2032-0-1-051	1984 actual	1985 est.	1986 est.	1984 actual	1985 est.	1986 est.
Program by activities:							
Direct program:							
00. 0101	other missiles	149,089	120,159				
00. 0201	Modification of missiles	23,795	15,107				
00. 0301	Spare and repair parts	38,016	29,571				
00. 0401	Support equipment and facilities	11,830	6,191				
00. 9101	Total direct program	222,730	171,026				
01. 0101	Reimbursable program				60,476	73,522	
10. 0001	Total				283,206	244,550	
Financing:							
Offsetting collections from:							
11. 0001	Federal funds(-)	14,993					
13. 0001	Trust funds(-)	-506					
14. 0001	Non-Federal sources(-)	-1					
17. 0001	Recovery of prior year obligations(-):	-25,946					
	Unobligated balance available, start of year:						
21. 4002	For completion of prior year budget plans	-52,600					
21. 4003	Available to finance new budget plans	-21,000					
21. 4007	Rerrogramming from/to prior year budget pls	73,600					
22. 4001	Unobligated balance transferred, end of year:						
24. 4002	For completion of prior year budget plans	244,550					
39. 0001	Budget authority						

**Missile Procurement, Army
Program and Financing (in Thousands of dollars)**

04 FEB 85
FISCAL YEAR 1985

		Budget Plan (amounts for PROCUREMENT actions programmed)		Obligations	
		1984 actual	1985 est.	1984 actual	1985 est.
Identification code 21-2032-0-1-051					
Program by activities:					
Direct program:					
00.0101	Other missiles	2,356,800	2,144,832	101,229	110,739
00.0201	Modification of missiles	107,200	69,445	32,395	5,360
00.0301	Spares and repair parts	268,100	185,141	69,554	13,409
00.0401	Support equipment and facilities	108,200	90,365	12,405	5,410
00.9101	Total direct program	2,840,300	2,469,803	215,583	134,914
01.0101	Reimbursable program	319,989	216,882	71,098	32,009
10.0001	Total	3,160,289	2,706,685	266,681	166,923
Financing:					
Offsetting collections from:					
11.0001	Federal funds(-)	-200,547	-200,547	-	-
13.0001	Trust funds(-)	-119,336	-119,336	-	-
14.0001	Non-Federal sources(-)	-106	-106	-	-
Unobligated balance available, start of year:					
21.4002	For compilation of prior year budget plans	-4,200	4,200	-	-
21.4007	Reprogramming from/to prior year budget plan	-32,600	-4,200	-32,600	-4,200
22.4001	Unobligated balance transferred, net	-	-	-	-
24.4002	Unobligated balance available, end of year:	-	-	-	-
25.0001	For completion of prior year budget plans	32,600	-	449,404	166,923
39.0001	Unobligated balance lapsing	-	-	32,600	-
Budget authority:					
40.0001	Budget authority:	2,836,100	2,836,100	2,836,100	2,836,100
41.0001	Appropriation	2,822,700	2,822,700	2,822,700	2,822,700
41.0001	Transferred to other accounts(-)	-19,200	-19,200	-19,200	-19,200
43.0001	Appropriation (adjusted)	2,803,500	-	2,803,500	-
50.0001	Reappropriation	32,600	-	32,600	-

Missile Procurement, Army Program and Financing (in thousands of dollars)		04 Feb 85 FISCAL YEAR 1985	
		Budget Plan (amounts for procurement actions programmed)	Obligations
Identification code	21-2032-0-1-051	1984 actual	1985 est.
	Program by activities:		
00. 0101	Direct program		
00. 0101	Other missiles	2,547,500	2,241,800
00. 0201	Modification of missiles	208,400	183,392
00. 0301	Spares and repair parts	270,300	14,588
00. 0401	Support equipment and facilities	132,100	16,921
00. 9101	Total direct program	3,158,300	116,248
01. 0101	Reimbursable program	393,200	9,247
10 0001	Total	3,551,500	2,779,304
	Financing:		
	Offsetting collections from:		
11. 0001	Federal funds(-)	-319,500	-319,500
13. 0001	Trust funds(-)	-73,700	-73,700
21. 4001	Unobligated balance available, start of year:		
	For completion of prior year budget plans		-495,160
	Unobligated balance available, end of year:		
24. 4002	For completion of prior year budget plans		
39. 0001	Budget authority		
	Budget authority:		
40. 0001	Appropriation	3,167,000	3,167,000
41. 0001	Transferred to other account (-)	-8,700	-8,700
43. 0001	Appropriation (adjusted)	3,158,300	3,158,300

2-6 February 1985

Missile Procurement, Army
Object Classification (In Thousands of dollars)

		1984 actual	1985 est.	1986 est.	04 Feb 85
Identification ccda	21-2032-0 1-051				
Direct obligations:					
Other services:					
12 5004 Other	637,664	536,206	567,379		
12 6001 Supplies and materials	1,391,268	1,614,617	1,709,903		
13 1001 Equipment	869,542	1,013,092	1,063,037		
19 9001 Total Direct obligations	2,898,474	3,165,915	3,416,291		
Reimbursable obligations:					
Other services					
22 5004 Other	66,020	71,382	67,466		
22 6001 Supplies and materials	144,044	220,144	187,098		
23 1001 Equipment	90,028	136,130	117,395		
29 9001 Total Reimbursable obligations	300,092	431,656	380,959		
99 9901 Total obligations	3,198,566	3,597,571	3,703,150		

2-9 February 1985

MISSILE PROCUREMENT, ARMY

Section 2

Budget Activity Justification

Activity 2 - Other Missiles

Activity 3 - Modification of Missiles

Activity 4 - Spares and Repair Parts

Activity 5 - Support Equipment and Facilities

2-10 February 1985

Department of the Army
Annual Budget Estimates
JUSTIFICATION

FY 1986
Budget

Appropriation
Missile Procurement, Army

Program or Budget Project Account

(Thousands of Dollars)

	Actual	Estimate	Actual	Estimate
	FY 1984	FY 1985	FY 1986	FY 1987
Activity 2 - Other Missiles				
Direct Obligation or Direct Budget Plan	\$2,356,800	\$2,547,500	\$2,786,000	\$3,174,000

Section 1 - PURPOSE AND SCOPE

Provides for procurement of surface-to-air, antitank assault, surface-to-surface and air-to-surface missile systems; related ground support equipment; and initial issue and replacement of losses consumed in reliability firings, crew proficiency firings, and other training activities.

Section 2 - JUSTIFICATION OF FUNDS REQUESTED

CHAPARRAL Missile System (P-1 Line Item No. 1)

	(\$ in Thousands)	
	FY 1986	FY 1987
	\$110,400	\$114,000

\$110.4 million is requested in FY 1986 for the first procurement of the Rosette Scan Seeker (RSS) missile to upgrade CHAPARRAL Missile with Infrared Counter-Counter Measures capability and ground support equipment for the National Guard. \$154.0 million in FY87 continues procurement of 1,000 CHAPARRAL RSS missiles.

Other Missile Support (P-1 Line Item No. 2)

	(\$ in Thousands)	
	FY 1986	FY 1987
	\$5,000	\$7,000

\$5.0 million in FY 1986 procures 106 replacement HAWK rocket motors and peculiar support equipment. The FY 1987 requirement is for 102 replacement rocket motors and peculiar support equipment at a cost of \$7.0 million.

2-11 February 1985

COMPARISON OF FY 1984 FINANCING AS REFLECTED
IN FY 1985 BUDGET WITH FY 1984 FINANCING
AS SHOWN IN FY 1986 BUDGET

(in Thousands of Dollars)

Appropriation:	Financing Per FY 1985 Budget		Financing Per FY 1986 Budget		Increase (+) or Decrease (-)
Program Requirements (Total)	\$3,121,900		\$3,160,289		+\$38,389
Program Requirements (Service Account)	(2,824,100)		(2,640,300)		+16,200
Program Requirements (Reimbursable)	(297,800)		(319,989)		+22,189
Loss:					
Anticipated reimbursements	297,800		319,989		+22,189
Re-programming from prior year budget plans			-4,200		-4,200
Net unobligated balance transferred	-32,600		-42,600		-10,000
Re-appropriation	32,600		32,600		-32,600
Unobligated balance lapsing					+32,600
BUDGET AUTHORITY	2,824,100		2,850,100		+12,000
BUDGET AUTHORITY	2,822,700		2,812,700		0
Appropriation	-31,200		-19,200		-12,000
Transferred to other accounts					+12,000
Appropriation (Adjusted)	2,791,500		2,793,500		0
Re-appropriation	32,600		32,600		0

2-25 February 1985

COMPARISON OF FY 1984 PROGRAM REQUIREMENTS
AS REFLECTED IN FY 1985 BUDGET WITH
FY 1984 PROGRAM REQUIREMENTS AS SHOWN IN FY 1986 BUDGET

SUMMARY OF REQUIREMENTS (in Thousands of Dollars)

	Total Program Requirements Per FY 1985 Budget	Program Requirements Per FY 1986 Budget	Increase (+) or Decrease (-)	
			Increase (+)	Decrease (-)
Activity 1 - Antiballistic Missile System	\$2,356,800	\$2,356,800	0	0
Activity 2 - Other Missiles	91,000	107,200	+16,200	0
Activity 3 - Modification of Missiles	268,100	268,100	0	0
Activity 4 - Spares and Repair Parts	108,200	108,200	0	0
Activity 5 - Support Equipment and Facilities				
TOTAL	\$2,824,100	\$2,810,300	+16,200	0

EXPLANATION OF ACTIVITY

Activity 1 - Modification of Missiles (+\$16.2) - Reflects \$14.2 million interappropriation transfer increase for HERPA-modification from OA and \$12.0 million of Greater Slope Reprogramming Action (OSD #84-16PA) which was disapproved and restored to the TOW modification program. Subsequent Congressional action in FY 85 called for the \$12.0 million to the Air Force for the PERKEEPER.

2-24 February 1985

EXPLANATION OF CHANGES IN FINANCING

The Fiscal Year 1985 has decreased by \$244.6 million since submission of the Fiscal Year 1985 budget to Congress. Adjustments to financing categories are explained below:

1. Anticipated Reimbursements: \$39.5 million increase in the foreign military sales program.
2. Budget Authority: Decrease of \$284.1 million due to Congressional reduction of \$275.4 million and \$8.7 million transferred to other appropriations.

2-23 February 1985

COMPARISON OF FY 1985 FINANCING AS REFLECTED
IN FY 1985 BUDGET WITH FY 1985 FINANCING
AS SHOWN IN FY 1986 BUDGET

(in Thousands of Dollars)

	Financing Per FY 1985 Budget	Financing Per FY 1986 Budget	Increase (+) or Decrease (-)
Appropriation:			
Program Requirements (Total)	\$3,796,100	\$3,551,500	-\$244,600
Program Requirements (Service Account)	(3,442,400)	(3,158,300)	-284,100
Program Requirements (Reimbursable)	(353,700)	(393,200)	+39,500
:			
Anticipated reimbursements	353,700	393,200	+39,500
Reprogramming from prior year budget plans		4,200	
Inobligated balance available from prior year to finance new budget plans			
Inobligated balance transferred		-4,200	
Net:			
Inobligated balance transferred to other accounts			
Inappropriation			
Inobligated balance available to finance subsequent year budget plans			
BUDGET AUTHORITY			
:			
BUDGET AUTHORITY			
Appropriation	3,442,400	3,167,000	-275,400
Transferred to other accounts		-8,700	-8,700
Appropriation (Adjusted)	3,442,400	3,158,300	-284,100

2-22 February

**COMPARISON OF FY 1985 PROGRAM REQUIREMENTS
AS REFLECTED IN FY 1985 BUDGET WITH
FY 1985 PROGRAM REQUIREMENTS AS SHOWN IN FY 1986 BUDGET**

SUMMARY OF REQUIREMENTS (in Thousands of Dollars)

Appropriation:	Total Program Requirements Per FY 1985 Budget	Program Requirements Per FY 1986 Budget	Increase (+) or Decrease (-)
Activity 1 - Antiballistic Missile System	0	0	0
Activity 2 - Other Missiles	\$2,821,000	\$1,47,500	-\$273,500
Activity 3 - Modification of Missiles	209,200	108,400	-800
Activity 4 - Spares and Repair Parts	289,700	170,300	-19,400
Activity 5 - Support Equipment and Facilities	122,500	132,100	+9,600
TOTAL	\$3,442,400	\$1,158,300	-\$284,100

EXPLANATION OF ACTIVITY

Activity 2 - Other Missiles (-\$273,5) - Decrease of \$255.6 million due to Congressional action. Decrease of \$17.9 million due to revised cost estimates based on execution of FY 1986 PATRIOT contract and budgeting to most likely cost for STINGER. Balance of \$8.3 million was transferred to another appropriation.

Activity 3 - Modification of Missiles (-\$0.8) - CHAPARAL modification requirements were revised.
Activity 4 - Spares and Repair Parts (-\$19.4) - Decrease of \$19.4 million due to Congressional action.

Activity 5 - Support Equipment and Facilities (+\$9.0) - Increase of \$9.6 million was transferred from Budget
Activity 2 to fund shortfall of Air Defense Targets.

MISSILE PROCUREMENT, ARMY

Section 3

Comparison of Program Requirements and Financing

Comparison of FY 1985 program requirements as reflected in FY 1985 budget with FY 1985 program requirements as shown in FY 1986 budget.

Comparison of FY 1985 financing as reflected in FY 1985 budget with FY 1985 financing as shown in FY 1986 budget.

Comparison of FY 1984 program requirements as reflected in FY 1985 budget with FY 1984 program requirements as shown in FY 1986 budget.

Comparison of FY 1984 financing as reflected in FY 1985 budget with FY 1984 financing as shown in FY 1986 budget.

Production Base Support (P-1 Line Item No. 24)

($\$$ in Thousands)

	FY 1986	FY 1987
	<u>\$29,900</u>	<u>\$43,000</u>

\$29.9 million is requested in FY 1986 and \$43.0 million is requested in FY 1987 for production base support for missiles and air defense. It includes: providing replacement or new equipment at White Sands Missile Range; rehabilitation/replacement of buildings and equipment at Government Owned/Contractor Operated facilities; and procurement of plant equipment required to support depot maintenance mission.

Other Production Charges (P-1 Line Item No. 25)

($\$$ in Thousands)

	FY 1986	FY 1987
	<u>\$2,000</u>	<u>\$2,000</u>

\$2.0 million is requested in FY 1986 and \$2.0 million in FY 1987 for the procurement of test systems/equipment to accomplish the quantity evaluation mission through stock surveillance, and evaluation of tactical weapon systems in stockpile.

2-19 February 1985

**Department of the Army
Annual Budget Estimates
JUSTIFICATION**

Program or Budget Project Account

		Appropriation		FY 1986	
		Missile Procurement, Army		Budget	
		(Thousands of Dollars)			
		Actual	Estimate	Actual	Estimate
Activity 5 - Support Equipment & Facilities		FY 1984	FY 1985	FY 1986	FY 1987
<u>Direct Obligation or Direct Budget Plan</u>		\$108,200	\$132,100	\$56,700	\$82,500

Section 1 - PURPOSE AND SCOPE

Provides for the procurement of support equipment, items less than \$900,000 and production base support for Army missile systems.

Section 2 - JUSTIFICATION OF FUNDS REQUESTED

Air Defense Targets (P-1 Line Item 11, 22)

		(\$ in Thousands)		FY 1987	
				\$34,000	
		FY 1986	\$21,000		

\$21.0 million is requested in FY 1986 and \$34.0 million in FY 1987 for procurement of air defense targets, towed targets and ground support systems. This program provides targets for training of air defense personnel.

Items Less Than \$900,000 (P-1 Line Item No. 23)

		(\$ in Thousands)		FY 1987	
				\$3,500	
		FY 1986	\$3,800		

\$3.8 million is requested in FY 1986 and \$3.5 million in FY 1987 for procurement of tool and test sets to support missile system maintenance and repair.

2-18 February 1985

<u>System</u>	<u>FY 1986</u>	<u>FY 1987</u>
CHAPARRAL MODS	31,200	16,400
HAWK MODS	22,100	28,000
PATRIOT MODS	4,300	5,100
TOW MODS	14,300	121,000
TOTAL	(206,400)	(177,500)

(\$ in Thousands)

	<u>FY 1985</u>	<u>FY 1986</u>
		\$115,600

Replenishment Repair Parts (P-1 Line Item No 21)
\$115.6 million is requested in FY 1986 and \$142.1 million is requested in FY 1987 for peacetime replenishment repair parts.

2-17 February 1985

Department of the Army Annual Budget Estimates JUSTIFICATION	Appropriation	FY 1986
Program or Budget Project Account	Budget	
		(Thousands of Dollars)
Actual	Estimate	Estimate
FY 1984	FY 1985	FY 1986
Activity 4 - Spares and Repair Parts		
Direct Obligation or Direct Budget Plan	\$268,100	\$270,300
		\$322,000
		\$319,600

Section 1 - PURPOSE AND SCOPE

Provides for the procurement of initial provisioning, peacetime replenishment, and mobilization reserve of repairable major assemblies and repair parts for surface-to-air, air-to-surface, surface-to-surface, and antitank missile systems and support items.

Section 2 - JUSTIFICATION OF FUNDS REQUESTED

Required for the procurement of initial provisioning, peacetime replenishment, and mobilization reserve requirements of centrally managed, high dollar value depot repairable components, assemblies, and repair parts which are not carried in Army stock fund inventories.

Initial Provisioning (P-1 Line Item No. 21)

	(\$ in Thousands)	FY 1986	FY 1987
		\$206,400	\$177,500

Initial Provisioning is requested to support the following major item procurements:

System	FY 1986	FY 1987
PATRIOT	\$105,000	\$105,600
HELLFIRE	2,300	-
STINGER	700	1,600
MLRS	20,600	1,000
TOW 2	5,900	7,000

2-16 February 1985

HAWK Modifications (P-1 Line Item No. 14)

(\$ in Thousands)		
	FY 1986	FY 1987
	<u>\$54,100</u>	<u>\$61,000</u>

\$54.1 million is requested in FY 1986 for the second year production buy of Phase III modification kits to improve the HAWK's missile capabilities. Phase III will improve fire power, low altitude target engagement, training capabilities of each fire unit, as well as reduce operator and maintenance workloads.

TOW Modifications (P-1 Line Item No. 15)

(\$ in Thousands)		
	FY 1986	FY 1987
	<u>\$37,800</u>	<u>\$424,600</u>

\$37.8 million is requested in FY 1986 and \$24.6 million in FY 1987 to provide an increased anti-armor capability and increased performance and hardening against smoke Electrical Optical Countermeasures. This program modifies existing basic TOW launchers to the TOW-2 configuration.

DRAGON Modification (P-1 Line Item No. 16)

(\$ in Thousands)		
	FY 1986	FY 1987
	<u>\$ --</u>	<u>\$21,600</u>

\$21.6 million is requested in FY 1987 to procure DRAGON Day Tracker.

Department of the Army Annual Budget Estimate		Appropriation		FY 1986
JUSTIFICATION		Missile Procurement, Army		Budget
Program or Budget Project Account		(Thousands of Dollars)		
		Actual	Estimate	Estimate
Activity 3 - Modification of Missiles	FY 1984	FY 1985	FY 1986	FY 1987
Direct Obligation or Direct Budget Plan	\$107,200	\$208,400	\$222,000	\$193,900

Section 1 - PURPOSE AND SCOPE

Provides for the modification of surface-to-air, surface-to-surface, and antitank missile systems.

Section 2 - JUSTIFICATION OF FUNDS REQUESTED

PATRIOT Modifications (P-1 Line Item No. 12)

(\$ in Thousands)		
	FY 1986	FY 1987
	\$17,200	\$52,900

\$17.2 million is requested in FY 1986 and \$52.9 million in FY 1987 to continue retrofit of the digital processor to improve missile fuse performance against sophisticated electronic countermeasures, expanded radar memory capacity, and an improved replacement capability in fielded equipment.

CHAPARRAL Modifications (P-1 Line Item No. 13)

(\$ in Thousands)		
	FY 1986	FY 1987
	\$112,900	\$33,800

\$112.9 million is requested in FY 1986 for procurement of forward looking infrared (FLIR) night sights, smokeless rocket motors, electronic compartment cooling modification kits, upgraded master control panels, and collective crew nuclear biological and chemical subsystems. \$33,800 is requested in FY 1987 to continue procurement.

2-14 February 1985

TOW Advance Procurement (P-1 Line Item No. 7)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$ 22,000</u>	<u>\$ --</u>

\$22.0 million in FY 1986 is requested to procure long lead items for surge capability for TOW production of 2500 missiles per month.

PERSHING (P-1 Line Item No. 8)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$334,700</u>	<u>\$7,300</u>

\$334.7 million is requested in FY 1986 to procure (54) missiles and associated ground equipment. PERSHING II will replace the PERSHING Ia missile in Europe. \$7.3 million in FY 1987 is to procure flight test instrumentation packages.

Multiple Launch Rocket System (MLRS) (MYP) (P-1 Line Item No. 9)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$507,000</u>	<u>\$460,500</u>

\$507.8 million is requested to procure 72,000 rockets, 44 launchers and associated ground support equipment in FY 1986. \$460.5 million is requested to procure 72,000 rockets and associated ground support equipment in FY 1987. The MLRS is a 227 millimeter diameter multiple launch rocket system with tracked self-propelled launcher/loader, disposable pods, and fire control equipment. Its mission is to neutralize or suppress enemy field artillery and air defense systems, and supplement cannon artillery when targets exceed capabilities during surge conditions. MLRS multiyear procurement strategy will save \$43.3 million in FY 86.

MLRS Advance Procurement (MYP) (P-1 Line Item No. 10)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$41,000</u>	<u>\$ --</u>

\$41.0 million is requested in FY 1986 to procure advance materials in economic order quantities as part of a multiyear procurement acquisition strategy for MLRS.

Joint Tactical Missile System (P-1 Line Item No. 11)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$ --</u>	<u>\$35,200</u>

\$35.2 million in FY 1987 initiates procurement of long lead items for the production of the Joint Tactical Missile System - Army (JTACMS-A).

2-13 February 1985

PATRIOT Missile System (P-1 Line Item No. 3)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$983,400</u>	<u>\$1,055,200</u>

\$983.4 million is requested in FY 1986 for 585 PATRIOT missiles and 12 fire units. In FY 1987 \$1,055.2 million is requested for procurement of 700 missiles and 12 fire units. PATRIOT is an improved system which will replace NIKE-HAWK batteries and some HAWK batteries and is specifically designed to defeat the advanced air threat of the 1990's and beyond. Procurement began in FY 1980 and will continue through FY 1990. Initial operational capability was achieved in CONUS in 1983 and will be achieved in Europe in March 1985.

STINGER Missile System (P-1 Line Item No. 4)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$304,100</u>	<u>\$585,900</u>

\$304.1 million is requested for the procurement of 3439 STINGER-POST/RMP missiles in FY 1986 and 585.9 million for 7130 STINGER-POST/RMP missile systems in FY 1987. The STINGER is a man-portable air defense missile system that provides self-defense to forward deployed, company size combat units.

LASER HELLFIRE System (P-1 Line Item No. 5)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$250,700</u>	<u>\$249,700</u>

\$249.7 million is requested in FY 1986 and \$249.7 million in FY 1987 to procure 6576 HELLFIRE missiles and associated equipment in both FY 1986 and FY 1987. This will also buy 154 training missiles (inert missiles with live seekers for aircrew training) in FY 1986. HELLFIRE missile system is designed to defeat the current and future armor threat at stand-off ranges. Mounted on the AH-64 helicopter, it will increase survivability and fire power.

TOW Missile System (P-1 Line Item No. 6)

(\$ in Thousands)	
FY 1986	FY 1987
<u>\$226,900</u>	<u>\$199,000</u>

The FY 1986 budget request of \$226.9 million will procure 20,100 TOW-2 missiles and ground support equipment. 17,000 TOW-2 missiles will be procured in FY87 at a cost of \$199.0 million. The TOW-2 system is an upgrade of the basic TOW which was originally fielded in 1970. The TOW-2 missile is designed to defeat current and future enemy armored vehicles.

EXPLANATION OF CHANGES IN FINANCING

The Fiscal Year 1984 program has increased \$38.4 million since preparation of the fiscal year 1985 budget. Adjustments to financing categories are explained below:

1. Anticipated Reimbursements: \$22.2 million increase in foreign military sales program.

Budget Authority: Increase of \$12.0 million due to Greater Slope Reprogramming Action (OSD #84-16PA). Reprogramming request was disapproved and restored to the TOW modification line. Subsequent Congressional action in FY 1985 will transfer the \$12.0 million to the Air Force for PEACEKEEPER. Reflects \$4.2 million interappropriation transfer for NIKE HERCULES modification from OPA.

MISSILE PROCUREMENT, ARMY

Section 5

Modification of Missiles (P-33)

<u>NUMBERS</u>	<u>ITEM NOMENCLATURE</u>	<u>PAGE NUMBER</u>
12	PATRIOT	2-28
13	CHAPARRAL	2-31
14	HAWK	2-36
15	TOW	2-40

2-27 February 1985

MISSILES MODIFICATIONS
(\$ in Millions)

Appropriation: Missile Procurement, Army

Missile Type: PATRIOT Air Defense Missile System

Missile Modification Title:

P³I Modular Azimuth Positioning System (MAPS): 1-82-03-1201

P³I Expanded Memory: 1-82-03-1202

P³I Digital Processor Fuzer: 1-82-03-1203

P³I Radar Enhancement: 1-82-03-1204

Description/Justification:

P³I 1-82-03-1201 - This modification provides improved positioning of the radar and launcher required when the launcher is not in the radar line of sight or when inclement weather or Nuclear Biological Chemical (NBC) environment precludes present positioning procedures.

P³I 1-82-03-1202 - This improvement doubles the computer memory in the Environment Control Central (ECCS) and the Information Coordination Central (ICC) giving increased capability for target acquisition and tracking.

P³I 1-82-03-1203 - This will equip the PATRIOT missile with a digital processor fuze to enhance missile performance as threat aircraft capabilities change.

P³I 1-82-03-1204 - An improvement to expand Radar Set Computer memory and increase converter dynamic range from 10 to 12 bits giving improved radar performance against targets with low radar cross sections.

PATRIOT Missile System

Scope of Program:

FY 1984 & PRIOR YEARS		FY 1985 CURRENT YEAR		FY 1986 BUDGET YEAR		FY 1987 BUDGET YR.FLT +1		FUTURE YEARS		TOTAL PROGRAM	
QTY	Amt	QTY	Amt	QTY	Amt	QTY	Amt	QTY	Amt	QTY	Amt
<u>RDT&E (P&I development for current & future PIPS</u>											
ROUTE	-	119.7	-	39.5	-	34.9	-	25.6	-	165.6	-
PIP 1-84-03-1201	-	-	-	-	-	-	419	1.1	63	6.9	48.8
MIP&	-	-	-	-	-	-	482	1.3	482	1.3	48.8
OIA	-	-	-	-	-	-	-	-	-	-	-
PIP 1-84-03-1202	5	2.0	7	0.7	4	0.6	-	-	-	16	5.4
MIP&	-	-	-	0.1	-	0.1	-	-	-	-	-
OIA	-	-	-	-	-	-	-	-	-	-	-
PIP 1-84-03-1203	-	100	11.1	50	6.7	385	25.9	335	27.2	870	77.9
MIP&	-	-	-	-	-	-	-	-	-	-	-
OIA	-	-	-	-	-	-	-	-	-	-	-
PIP 1-84-03-1204	-	-	-	-	-	11	9.9	30	21.1	5	3.8
MIP&	-	-	-	-	-	-	10.9	-	1.4	46	5.4
OIA	-	-	-	-	-	-	-	-	-	-	-

Basis for Cost Estimate: Costs are based on development analyses which in turn is derived from the cost of similar items.

Method of Implementation: All modifications will be installed by contractor teams in the field except the processor which will be added during missile recertification concurrent with the return of missiles from the field for replacement of components with expired shelf life.

2-29 February 1985

Development Status:

PIP 1-82-031201 - A feasibility study has been completed and Modular Azimuth Positioning System (MAPS) selected as the PATRIOT Emplacement Enhancement. MAPS is being developed by the Project Manager for Cannon Artillery systems.

PIP 1-82-03-1202 - Expanded Memory has completed development and is currently being incorporated into PATRIOT during production.

PIP 1-82-03-1203 - Digital Processor Fuze was developed by the Army's Harry Diamond labs and first kits were procured in FY 1985.

PIP 1-82-03-1204 - Engineering Development on the Radar Memory Enhancement began May 1983 and will be completed late FY 1985 for first procurement in FY 1986.

MISSILES MODIFICATIONS
(\$ in Millions)

Appropriation: Missile Procurement, Army

Missile Type: CHAPARRAL

Missile Modification Title:

Pneumatic System: 1-80-03-0309
Rocket Motor Insulator: 1-83-03-0325
Smokeless Rocket Motor: 1-83-03-0326
Night Capability: 1-80-03-0306
Master Control Indicator Panel: 1-82-03-0315
Cooling Rear Compartments: 1-82-03-0320
NMC Collective Protection: 1-82-03-0324
FLIR Optical Improvements: 1-83-03-0327

Description/Justification:

PIP 1-80-03-0309 - This Reliability Improvement of Selected Equipment (RISE) PIP results from low Mean Time Between Failure (MTBF) of the CHAPARRAL Air Compressor and its associated pneumatic system which results in excessive depot overhaul and requirements/cost. Selected items from the pneumatic system, as well as the compressor itself, will be improved or replaced with more suitable and reliable items. To the maximum extent possible, program will consist of improvements to existing items or replacement with items currently designed and in production.

PIP 1-83-03-0325 - This PIP provides a safety improvement to the M121 smokeless motor by eliminating the use of asbestos in the motor case insulator. This product improvement also reduces motor production cost. The basis for this improvement is a requirement for DOD and OSHA to eliminate the use of chrysotile asbestos.

PIP 1-83-03-0326 - This PIP provides for the repour of CHAPARRAL missile Rocket Motors which exceed their shelf life with a smokeless propellant. The repour extends the field life of the CHAPARRAL missile. The smokeless rocket motor reduces missile signature when the CHAPARRAL fire unit engages targets.

2-31 February 1985

PIP 1-80-03-0306 - The night capability improvement will enable the gunner to detect and engage aircraft during periods of darkness and limited visibility conditions. The Night Sight major components are a forward looking infrared (FLIR) thermal imaging device, track optics, gunner's TV display, autotrack subsystem and operator controls. The present CHAPARRAL missiles have the capability to track and engage aircraft during darkness and limited visibility, but the operator is limited to daylight operations by the necessity to visually detect and acquire aircraft. The night sight will significantly increase the envelope in which the system may operate (Day/night/adverse weather).

PIP 1-80-03-0315 - This PIP will upgrade the CHAPARRAL Master Control Indicator Panel (MCIP) by installation of upgraded electric components, and the repackaging/rewiring of the panel. The modifications will provide improved system reliability, thereby reducing system downtime and maintenance/repair costs.

PIP 1-80-03-0320 - This PIP will reduce the rear electronic compartment temperature by providing larger capacity air conditioner, improved ducting, and added baffles for better air circulation. High temperature in the electronics compartment has been a primary cause of equipment failure. The PIP will improve system operability/maintainability.

PIP 1-80-03-0324 - This PIP will provide protection to CHAPARRAL crew members in the event of a nuclear, biological, or chemical attack. There will be two separate protection systems-one for the gunner in the launching station, and the other for the five crew members when they are in the vehicle cab.

PIP 1-80-03-0327 - This PIP will provide the FLIR Night Sight with optical improvements.

CHAPARRAL Guided Missile Intercept, Aerial MIM-72-A/C (Continued)

Scope of Program:

FY 1984 & PRIORITY YEARS				FY 1985 CURRENT YEAR				FY 1986 BUDGET YEAR				FY 1987 BUDGET YEAR +1				FUTURE YEARS				TOTAL PROGRAM	
<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>
PIP 1-80-03-0309																					
MIPA	235	11.6		285	8.6	-		-		-		-		-		-		520	20..		
RDT&E	-	-		-	-			-		-		-		-		-		-			
OMA	-	1.4	-	-	1.1	-		0.7	-	-		1.3	-	-	1.1	-	-	5.6			
PIP 1-83-03-0325																					
MIPA	-	2.0		-	-			-		-		-		-		-		-	2.0		
RDT&E	-	-		-	-			-		-		-		-		-		-			
OMA	-	-		-	-			-		-		-		-		-		-			
PIP 1-83-03-0326																					
MIPA	1048	8.7		524	4.8	-		-		-		524	-	1.1	1572	16.5	4192	400..			
RDT&E	-	-		-	-			-		-		-		-	-	-	-	-			
OMA	-	-		-	-			-		-		-		-	-	-	-	-			
PIP 1-80-03-0306																					
MIPA	241	126.5		101	71.0	-		-		-		98.4	-	-	-	-	-	522	299..		
RDT&E	-	18.9	-	-	-			-		-		-		-	-	-	-	15.9			
OMA	-	2.2	-	-	3.9	-		-		2.2	-	-	4	-	-	2.9	-	14.6			
PIP 1-82-03-0315																					
MIPA	-	-		397	1.9	-		-		-		1.9	-	-	-	-	-	795	3.3		
RDT&E	-	-		-	-			-		-		0.1	-	0.3	-	-	1.1	-	1.7		
OMA	-	0.2	-	-	-			-		-		-		-	-	-	-				
PIP 1-82-03-0320																					
MIPA	-	-		260	4.9	260	-	4.9	-	-		-	-	-	-	-	520	9.6			
RDT&E	-	-		-	-			-		-		-		-	-	-	-	1.4			
OMA	-	0.5	-	-	-			-		-		-		1.0	0	1.9	-	-			

2-33 February 1985

CHAPARRAL, Guided Missile Intercept, Aerial MIM-72-A/C (Continued)

Scope of Program:

	FY 1984 & PRIOR YEARS		FY 1985, CURRENT YEAR		FY 1986 BUDGET YEAR		FY 1987 BUDGET YEAR + 1		FUTURE YEARS		<u>TOTAL, PROGRAM</u>
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	
<u>PIP 1-K2-03-0324</u>											
MILPA	-	-	260	2.6	260	2.5	-	-	-	-	520
RDT&E	-	3.1	-	-	-	-	-	-	-	-	3.1
OMA	-	-	-	-	-	-	0.6	-	1.0	-	1.6
<u>PIP 1-K2-03-0327</u>											
MILPA	-	-	-	-	-	1.5	-	28.7	398	97.6	532
RDT&E	-	1.4	-	-	-	-	-	-	-	-	7.4
OMA	-	-	-	-	-	-	-	-	1.1	-	1.1

Basis for Cost Estimate: Analytical and engineering techniques.

Method of Implementation: Field installation by contractor/government contract teams.

CHAPARRAL, Guided Missile Intercept, Aerial MIM-72-A/C (Continued)

Development Status:

- PIP 1-80-03-0309 - Pneumatic improvement was developed along with Night CHAPARRAL. Development completed in FY 1982 and procurement began that year.
- PIP 1083-03-0325 - New Insulation has been developed and is being cut into existing contract for rocket motors.
- PIP 1-83-03-0326 - Smokeless missile rocket motors completed development and began procurement in 1983.
- PIP 1-80-03-0306 - Night CHAPARRAL completed development in 1983. Installation started in FY 1984 and will be completed in the 3rd Qtr, FY 1988.
- PIP 1-82-03-0315 - Master Control Indicator Panel modification has completed development. Installation starts in 2nd Qtr FY 1987 and will be completed in FY 1989.
- PIP 1-82-03-0320 - Engineering Development completed in FY 1983. Installation starts in 2nd Qtr FY 1984 and will be completed in FY 1989.
- PIP 1-83-03-0324 - RDT&E effort began in FY 1983 and was completed late in FY 1984. Installation starts in 2nd Qtr, FY 1987 and will be completed in FY 1989.
- PIP 1-83-03-0327 - This PIP is still in development which completed in FY 1987, with first procurement that year.

MISSILES MODIFICATIONS
(\$ in Millions)

Aproprillation: Missile Procurement , Army

Missile Type: HAWK

Missle Modification Title:

Missile ECM Upgrade (MEU)/Multiple Blinking Jammer (MBJ) PIP 1-79-03-0119
Phase III Product Improvement PIP 1-82-03-0140
Collective Protection Equipment PIP 1-82-03-0138

Description/Justification:

PIP 1-79-03-0119 - The HAWK system was designed against the expected ECM threat of the 1970s. The advancing ECM threat and the requirement to keep HAWK viable into the 1990's requires the missile performance to be upgraded. System analysis has identified missile upgrading improvements that are considered critical to the successful intercepts of high performance aircraft. The effort involves the design, development, testing, production and retrofitting modifications to the HAWK missile. These improvements will increase the performance of the HAWK missile in an advanced ECM environment.

PIP 1-82-03-0140 - PIPS 1-82-03-0130, 1-81-03-0131, 1-81-03-0132, 1-81-03-0134, and 1-81-03-0137 have been combined into one Phase III PIP. This PIP includes a fire power improvement called LASHE (Low Altitude Simultaneous HAWK Engagement). LASHE provides a significant capability against multiple pop-up targets and saturation raids. Also a micro-computer will replace the present analog Target Intercept Computer in the High Power Illuminator (HPI) radar to improve the HAWK tracking radar's detection and tracking capabilities with solid state electronics. The Automatic Data Processor (ADP) located in the Platoon Command Post (PCP) will be replaced by a single drawer micro-computer with increased memory and throughput. This improvement provides the computational capacity to meet new system requirements, e.g., LASHE. An Integral Operator Training (IOT) will provide each PCP with necessary software and hardware changes to permit training on a daily basis without interrupting or disconnecting equipment. The IOT eliminates the present AN/TPQ-29 Wave Acquisition Radar (CWAR), detects and acquires low altitude targets. The CWAR's transmitted waveform and processing of received signals will be modified to permit a more accurate and timely air picture to be sent to battalion and higher echelons of command and control.

HAWK (HAWK) (Continued)

PIP 1-82-03-0138 - Protection against NBC agents will be provided by Collective Protection Equipment (CPE). CPE involves the protection to the PCP interior against hazardous concentrations of nuclear, biological and chemical agents while providing clean filtered air. CPE will consist of a gas-particulate filter, a protective entrance, and an air conditioner. This improvement is essential for survival and mission accomplishment.

Scope of Program:

FY 1984 & PRIOR YEARS		FY 1985 CURRENT YEAR		FY 1986 BUDGET YEAR		FY 1987 BUDGET YEAR +1		FUTURE YEARS		TOTAL PROGRAM	
<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>
<u>PIP 1-79-03-0119</u>											
MIPA	12.6			45.1	4.8						
RDT&	34.1	3.8			4.0						
OMA	--	--		--	--						
<u>PIP 1-82-03-0140</u>											
MIPA	17.5			11.9	47.2						
RDT&	0	18.8			--						
OMA	0	.9		2.9							
<u>PIP 1-82-03-0138</u>											
MIPA	.8			1.1	2.0						
RDT&	3.2			--	--						
OMA	--			.1	.2						

Basis for Cost Estimate:

PIP 1-79-03-0119 - Prior years based on firm fixed price contract. Current and future years based on engineering estimates.

PIP 1-82-03-0140 - Engineering estimates based on experience, contractor learning curve, and equivalency in complexity to items already developed, produced, and installed.

PIP 1-82-03-0138 - Engineering estimates.

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HAWK (HAWK) (Continued)

Method of Implementation:

PIP 1-i-03-0119 - At the time a missile is returned to the contractor's plant for normal replacement of expired shelf-life items and to undergo reliability restoration, the MEU modification will be incorporated. The MBJ kits will be applied at the Theater Reliability Maintenance Facility (TRMF).

PIP 1-i-03-0140 - Phase III modification kits will be applied by contractor teams at Letterkenny Army Depot during equipment overhaul and at field locations.

PIP 1-i-03-0138 - CPE kits will be applied by contractor teams in the field and at Letterkenny Army Depot. Concurrent with Phase III modifications.

Development Status:

PIP 1-i-03-0119

	(MEU)	(MBJ)	MBJ/FUZE Add
Development Contract	1QFY79	3QFY81	3QFY85
Initial Testing	4QFY80	4QFY82	4QFY85
Procurement Contract	2QFY82	4QFY84	4QFY86
Initial Production Delivery	4QFY83	1QFY86	1QFY87
Completion Installation	4QFY85	1QFY88	3QFY88

PIP 1-i-03-0140

Development Contract	3QFY82
Initial Testing	2QFY83
Procurement Contract	4QFY85
Initial Production Delivery	3QFY87
Completion Installation	4QFY91

Hawk (HAWK) (Cont'dued)

FIP 1-84-03-0138

<u>(MEU)</u>	<u>(MBJ)</u>
Development Contract	4QFY83
Initiate Testing	2QFY84
Procurement Contract	4QFY85
Initial Production Delivery	3QFY87
Complete Installation	4QFY91

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MBJ/CL/ZE ADD

MISSILES MODIFICATIONS
(\$ in Millions)

Appropriation: Missile Procurement, Army

Missile Type: TOW (RGM-71A, BGM-71B), BTM-71A) Heavy Anti-tank Guided Missile System.

Missile Modification Title:

PIP 1-76-03-3005 - Night Sight Brackets
PIP 1-82-03-3020 - Missile Conversion
PIP 1-82-03-3021 - Missile Ordnance Inhibit Circuit (MOIC)
PIP 1-84-03-3022 - Optical Improvement
PIP 1-83-03-3024 - Optical Improvement
PIP 1-84-03-3025 - Lithium Battery

Description/Justification:

PIP 1-76-03-3005 - Provides brackets for storage and transportation of Night Sights in TOW equipped vehicles.

PIP 1-82-03-3020 - Replaces HEAT warheads with practice warheads on TOW missile designated to be fired for training. Some ranges cannot sail, accomodate the blast of a HEAT warhead.

PIP 1-82-03-3021 - Equips older TOW missiles with a MOIC to stop warhead activation in the event of flight motor ignition failure to protect gunners from a nearby warhead detonation.

PIP 1-83-03-3022 - Improvements to TOW sights.

PIP 1-83-03-3024 - Provides a filter to protect TOW gunners from laser radiation of commonly used battlefield devices such as rangefinders and location devices.

PIP 1-84-03-3025 - Replaces the currently used Nickle Cadmium batteries with Lithium batteries.

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TOW (BGM-71A, BGM-71D, BTM-71A) Heavy Anti-tank Guided Missile System

Scope of Program:

	FY 1984 & PRIOR YEARS		FY 1985 CURRENT YEAR		FY 1986 BUDGET YEAR		FY 1987 BUDGET YEAR + 1		FUTURE YEARS		TOTAL PROGRAM	
	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>	<u>Qty</u>	<u>Amt</u>
PIP 1-76-03-3005												
MIPA	4,119	4.1	--	--	2,956	7.4	--	--	--	--	7,075	11.4
RDT&E												
OMA	2,248	3.7	200	0.2	1,465	1.1	1,484	1.4	1,678	0.8	7,075	7.
PIP 1-82-03-3020												
MIPA	6,000	3.5	3,600	0.8	3,600	0.9	4,800	1.3	--	--	20,000	6.5
RDT&E												
OMA	4,225	1.1	3,600	0.9	3,600	0.9	3,600	0.9	4,975	1.0	20,000	4.5
PIP 1-82-03-3021												
MIPA	9,975	4.0	3,600	0.7	3,600	0.7	2,821	0.6	--	--	19,996	0.0
RDT&E	--	--	--	0.9	3,600	--	0.9	3,600	--	--	--	--
OMA	5,775	1.6	3,600	--	3,600	--	3,600	--	3,421	0.9	19,996	0.0
PIP 1-84-03-3022												
MIPA	--	--	803	9.7	1,113	20.4	2,212	0.6	--	--	4,128	0.0
RDT&E	--	3.4	--	7.7	--	5.1	--	--	--	--	--	10.4
OMA	--	--	--	--	--	--	--	0.2	--	--	--	0.4
PIP 1-84-03-3024												
MIPA	4,800	2.5	4,800	2.0	4,800	2.2	4,682	1.1	--	--	19,082	0.0
RDT&E	--	0.1	--	--	--	--	0.5	--	0.8	--	1.4	--
OMA	--	--	--	--	--	--	--	--	--	--	--	0.0
PIP 1-84-03-3025												
MIPA	--	0.1	--	0.4	--	0.1	--	--	--	--	--	0.0
RDT&E	--	--	--	--	--	--	--	--	7,368	0.2	7,368	0.0
OMA	--	--	--	--	--	--	--	--	--	--	--	0.0
PIP 1-78-03-3018												
MIPA	5,936	230.4	969	15.9	251	6.1	--	--	--	--	7,146	0.0
RDT&E	--	62.0	--	1.6	1,144	1.7	973	1.4	2,378	3.1	7,146	0.0
OMA	1,810	1.7	841	--	--	--	--	--	--	--	--	0.0

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DEVELOPMENT STATUS:

- PIP 1-79-03-3005 - Development of Night Sight Brackets completed in FY 1985.
- PIP 1-82-03-3029 - Warhead Conversion in development is complete.
- PIP 1-82-03-3021 - A 24 month Engineering development for MOIC was completed in 1980.
- PIP 1-84-03-3022 - Optical Improvement began Advanced Development in 1984. Engineering and service testing will be completed in 1985 with an FY 1986, first buy.
- PIP 1-83-03-3024 - R&D for Optical Filters was completed in 1984 with first procurement contract awarded that year.
- PIP 1-84-03-3025 - Design verification of production Lithium Batteries is currently being conducted.

END

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